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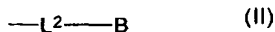
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ning of each regular issue of the PCT Gazette.

(54) Title: SITE-SPECIFIC LABELLING OF PROTEINS USING ACRIDONE AND QUINACRIDONE LIFETIME DYES



(57) Abstract: Disclosed are compounds of formula: (I) In which D is a fluorescent dye selected from an acridone and a quinacridone dye; F comprises a target bonding group selected from a carboxylic acid thioester group and a 1,2-aminothiol group; M is a group adapted for attaching to F; X is selected from hydrogen or the group: (II), wherein B is an affinity tag; and L¹ and L² each independently comprise a group containing from 1 to 40 linked atoms selected from carbon atoms which may optionally include one or more groups selected from -NR¹, -O-, -CH=CH-, -CO-NH- and phenylenyl groups, where R¹ is selected from hydrogen and C₁ - C₄ alkyl. The invention also relates to methods that afford direct attachment of the acridone or quinacridone dye to either the N-terminus or C-terminus of a synthetic or recombinant peptide or protein, and their derivatives, in a site-specific manner, coupled with purification of the resultant labelled molecule. Site-specific protein on peptide labelling involves the reaction of a thioester group with a 1,2-aminothiol group as for native chemical ligation.

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